

&lt;400&gt; 1

Lys Glu Phe Thr Leu Asp Phe Ser Thr Ala Lys Thr Tyr Val Asp Ser

1 5 10 15

Leu Asn Val Ile Arg Ser Ala Ile Gly Thr Pro Leu Gln Thr Ile Ser

20 25 30

Ser Gly Gly Thr Ser Leu Leu Met Ile Asp Ser Gly Ser Gly Asp Asn

35 40 45

Leu Phe Ala Val Asp Val Arg Gly Ile Asp Pro Glu Glu Gly Arg Phe

50 55 60

Asn Asn Leu Arg Leu Ile Val Glu Arg Asn Asn Leu Tyr Val Thr Gly

65 70 75 80

Phe Val Asn Arg Thr Asn Asn Val Phe Tyr Arg Phe Ala Asp Phe Ser

85 90 95

His Val Thr Phe Pro Gly Thr Thr Ala Val Thr Leu Ser Gly Asp Ser

100 105 110

5/8

Ser Tyr Thr Thr Leu Gln Arg Val Ala Gly Ile Ser Arg Thr Gly Met

115

120

125

Gln Ile Asn Arg His Ser Leu Thr Thr Ser Tyr Leu Asp Leu Met Ser

130

135

140

His Ser Gly Thr Ser Leu Thr Gln Ser Val Ala Arg Ala Met Leu Arg

145

150

155

160

Phe Val Thr Val Thr Ala Glu Ala Leu Arg Phe Arg Gln Ile Gln Arg

165

170

175

Gly Phe Arg Thr Thr Leu Asp Asp Leu Ser Gly Arg Ser Tyr Val Met

180

185

190

Thr Ala Glu Asp Val Asp Leu Thr Leu Asn Trp Gly Arg Leu Ser Ser

195

200

205

Val Leu Pro Asp Tyr His Gly Gln Asp Ser Val Arg Val Gly Arg Ile

210

215

220

Ser Phe Gly Ser Ile Asn Ala Ile Leu Gly Ser Val Ala Leu Ile Leu

225

230

235

240

6/8

Asn Cys His His His Ala Ser Arg Val Ala Arg Met Ala Ser Asp Glu

245 250 255

Phe Pro Ser Met Cys Pro Ala Asp Gly Arg Val Arg Gly Ile Thr His

260 265 270

Asn Lys Ile Leu Trp Asp Ser Ser Thr Leu Gly Ala Ile Leu Met Arg

275 280 285

Arg Thr Ile Ser Ser

290

&lt;210&gt; 2

&lt;211&gt; 69

&lt;212&gt; PRT

&lt;213&gt; Shigella dysenteriae

&lt;400&gt; 2

Thr Pro Asp Cys Val Thr Gly Lys Val Glu Tyr Thr Lys Tyr Asn Asp

1 5 10 15

7/8

Asp Asp Thr Phe Thr Val Lys Val Gly Asp Lys Glu Leu Phe Thr Asn

20 25 30

Arg Trp Asn Leu Gln Ser Leu Leu Leu Ser Ala Gln Ile Thr Gly Met

35 40 45

Thr Val Thr Ile Lys Thr Asn Ala Cys His Asn Gly Gly Gly Phe Ser

50 55 60

Glu Val Ile Phe Arg

65

&lt;210&gt; 3

&lt;211&gt; 94

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: a mutagenic  
primer synthesized for creation of ShT libraries

&lt;400&gt; 3

8/8

aaggtaggt atacaaaata taatnnsnns nnsnnsnnsa cagttaaagt gggtagataa 60

gaattannsn nsnnsnnstg gaattctcag tctc

94

&lt;210&gt; 4

&lt;211&gt; 128

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: a mutagenic

primer synthesized for creation of ShT libraries

&lt;400&gt; 4

tacgtactgc agctcgagtc aacgaaaaat aactcgctg aatccaccgc cattatggca 60

cgcgtaggtt ttaatggta cagtcatacc ggtaatttgc gcactgagaa gaagagactg 120

aagattcc

128

## INTERNATIONAL SEARCH REPORT

International Application No.

PCT/CA 98/01137

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 C12N15/10 C07K14/25 C12Q1/68 A61K31/70 A61K39/02  
G01N33/68

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 C12N C07K C12Q A61K G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	T. IIDA ET AL.: "A single amino acid substitution of Escherichia coli enterotoxin affects its oligomer formation". J. BIOL. CHEM., vol. 265, no. 24, 25 August 1989, pages 14065-14070, XP002096323 AM. SOC. BIOCHEM. MOL. BIOL., INC., BALTIMORE, US	1,3,5,8, 9,16,17
Y	see Materials and Methods see page 14068, right-hand column, paragraph 2  --- -/--	1,6



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

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"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

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"&amp;" document member of the same patent family

Date of the actual completion of the international search

12 March 1999

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